L4 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2000 ACS
AB Complexes of a selected class of chiral **ligands** with general formula CyN-(C:O)-X-C*R1R3-C*R2R4-X-(C:O)-CyN (X = O, NH, NR; CyN = nitrogen contg. heterocycle) with **molybdenum**, **tungsten** or **chromium**, preferably **molybdenum**, are effective as catalysts in highly enantioselective and regioselective **alkylation** of allylic substrates. Such **compns.** provide a versatile and low-cost alternative to existing catalysts. Thus, PhCH:CHCH2OCO2Me reacts with NaHC(CO2Me)2 in refluxing THF in the presence of [(EtCN)3Mo(CO)3] and chiral **ligand** N,N'-1R,2R-cyclohexanediylbis(2-**pyridinecarboxamide**) to give alkylated products in 88% isolated yield with a regioselectivity of 32:1 in favor of the branched (S)-PhCH[CH(CO2Me)2]CH:CH2 product (99% ee) over the linear product PhCH:CHCH2CH(CO2Me)2.
AN 1999:421592 CAPLUS
DN 131:101904
TI **Molybdenum** bis(**pyridinecarboxamide**) chiral **ligand** complex catalytic **compositions** and methods for asymmetric allylic **alkylation**
IN Trost, Barry M.; Hachiya, Iwao
PA The Board of Trustees of the Leland Stanford Junior University, USA; Chirotech Technology Limited
SO PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9932225 | A2 | 19990701 | WO 1998-GB3850 | 19981221 |
| WO 9932225 | A3 | 19991104 | | |

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

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|---|---|---|---|---|
| AU 9917711 | A1 | 19990712 | AU 1999-17711 | 19981221 |
| PRAI US 1997-68128 | 19971219 | | | |
| WO 1998-GB3850 | 19981221 | | | |

OS CASREACT 131:101904; MARPAT 131:101904

L4 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2000 ACS
AB **Alkylation** of Cp***Cr**(THF)Cl2 (Cp* = pentamethylcyclopentadienyl) with 1 or 2 equiv of LiCH2SiMe3 yielded the paramagnetic **Cr** alkyls [Cp***Cr**(.mu.-Cl)(CH2SiMe3)]2 (1), Cp***Cr**(CH2SiMe3)2 (2), and Cp***Cr**(L)(CH2SiMe3)2 (3a, L = py (**pyridine**); 3b, L = THF). Compd. 2 is a coordinatively unsatd., pseudo-five-coordinate CrIII complex with a 13-electron configuration, and it catalyzes the polymn. of ethylene. The thermal decompn. of 2 in noncoordinating solvents proceeded via an intermediate, the bis(.mu.-alkylidene) complex [Cp***Cr**(.mu.-CHSiMe3)]2 (4). Compd. 4 suffered reductive elimination to yield the dinuclear CrII alkyl Cp*2Cr2(.mu.-CH2SiMe2CH2-.mu.-CHSiMe3) (5). In contrast, the decompn. of 2 in THF, i.e., 3b, yielded the metallacycles Cp***Cr**(L)[(CH2)2SiMe2] (6a, L = py; 6b, L = THF). Compds. 1, 2, 3b, 4, and 5 were structurally characterized by x-ray diffraction. The reactions of 2 are rationalized in terms of competing .alpha.- and .gamma.-H elimination **processes** yielding terminal alkylidene and

metallacyclobutane intermediates existing in equil.
AN 1998:724720 CAPLUS
DN 130:95641
TI Structure and Reactivity of Trimethylsilylmethyl Complexes of **Chromium**, Including the 13-Electron Alkyl CpCr(CH2SiMe3)2
AU Heintz, Robert A.; Leelasubcharoen, Somying; Liable-Sands, Louise M.; Rheingold, Arnold L.; Theopold, Klaus H.
CS Department of Chemistry and Biochemistry, University of Delaware, Newark, DE, 19716, USA
SO Organometallics (1998), 17(25), 5477-5485
CODEN: ORGND7; ISSN: 0276-7333
PB American Chemical Society
DT Journal
LA English
OS CASREACT 130:95641
RE.CNT 44
RE
(2) Bhandari, G; Chem Eur J 1995, V1, P199 CAPLUS
(3) Bhandari, G; Organometallics 1995, V14, P738 CAPLUS
(4) Brookhart, M; Prog Inorg Chem 1988, V36, P1 CAPLUS
(5) Cotton, F; Inorg Chim Acta 1990, V172, P135 CAPLUS
(6) Fettinger, J; Organometallics 1996, V15, P4211 CAPLUS
AL

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       1260282 METAL
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=> s l1 and binding and metal

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          1323 BINDINGS
        611018 BINDING
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       1064724 METAL
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                 (METAL OR METALS)
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        518001 METALS
       1260282 METAL
                 (METAL OR METALS)
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        124830 PYRIDINE
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            14 PYRAMIDINE
             4 PYRAMIDINES
            17 PYRAMIDINE
                 (PYRAMIDINE OR PYRAMIDINES)
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        518001 METALS
       1260282 METAL
                 (METAL OR METALS)
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        126904 LIGANDS
        257206 LIGAND
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L13          5 L1 AND LIGAND

=> d l9 1-2 abs bib hitstr


L9   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2000 ACS
AB   Asym. induction in metal-catalyzed allylic alkylations with
     stabilized nucleophiles places severe demands on the nature of the
     inducing ligands because of the distal relationship between the incoming
     nucleophile and the chiral environment.  A model invoking creation of
     chiral pockets led to the generation of a series of chiral and optically
```

active ligands derived from the com. available 1,1'-binaphthol. Asym. syntheses of nearly 70% enantiomer excess are accessible at practical operating temps. of 25-66.degree..
AN 1985:437000 CAPLUS
DN 103:37000
TI A model for **metal**-templated catalytic asymmetric induction via .pi.-allyl fragments
AU Trost, Barry M.; Murphy, Dennis J.
CS Dep. Chem., Univ. Wisconsin, Madison, WI, 53706, USA
SO Organometallics (1985), 4(6), 1143-5
CODEN: ORGND7; ISSN: 0276-7333
DT Journal
LA English

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2000 ACS
AB Alkylation of (MeCO)2CH2 with allylic alcs. in the presence of Pd catalysts gave mono- and dialkylated products. E.g., (MeCO)2CH2 was treated with MeCH(OH)CH:CH2 in the presence of Ph3P and Pd(acac)2 (acacH = acetylacetone) (85-90.degree., 17 h, under N2) to give 41% (E)-(MeCO)2CHCH2CH:CHMe [(E)-I], 11% (Z)-I, 30% (MeCO)2CHCHMeCH:CH2, 12% (E,E)-(MeCO)2C(CH2CH:CHMe)2 [(E,E)-II], 5% (E,Z)-II, and 1% (Z,Z)-II.
AN 1982:34484 CAPLUS
DN 96:34484
TI **Metal** complexes in organic synthesis. V. Alkylations of pentane-2,4-dione with allylic alcohols under palladium catalysis
AU Moreno-Manas, M.; Trius, A.
CS Dep. Quim. Org., Univ. Auton. Barcelona, Barcelona, Spain
SO Tetrahedron (1981), 37(17), 3009-15
CODEN: TETRAB; ISSN: 0040-4020
DT Journal
LA English

=> s l13 abs bib hitstr 1-5

MISSING OPERATOR L13 ABS
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> d l13 abs bib hitstr 1-5

L13 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2000 ACS
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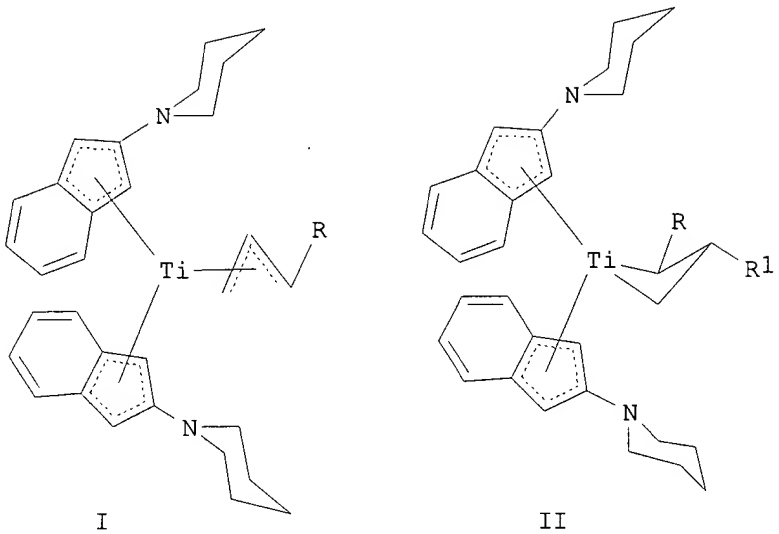


I II

AB In contrast to reactions of the bis(pentamethylcyclopentadienyl)titanium system, substituted allyl complexes of the electron-rich bis(2-piperidinoindenyl)titanium(III) template, e.g. I (R = Ph, Me) are converted to 2,3-disubstituted titanacyclobutane complexes, e.g. II (R = Me, Ph; R1 = iPr, cyclohexyl, tBu,) by free radical alkylation at the allyl central carbon. The crystal structure of I (R = Ph) was detd.
AN 1999:98050 CAPLUS
DN 130:252447
TI Titanacyclobutane Synthesis by Radical Alkylation of Substituted Allyl Complexes. The Use of Electron-Rich Bis(2-piperidinoindenyl)titanocene(III) Complexes to Control Allyl **Ligand** Reactivity
AU Carter, Charles A. G.; McDonald, Robert; Stryker, Jeffrey M.
CS Department of Chemistry, University of Alberta, Edmonton, AB, T6G 2G2, Can.
SO Organometallics (1999), 18(5), 820-822
CODEN: ORGND7; ISSN: 0276-7333
PB American Chemical Society
DT Journal
LA English
OS CASREACT 130:252447
RE.CNT 32
RE
(1) Barsties, E; J Organomet Chem 1996, V520, P63 CAPLUS
(2) Blenkers, J; J Organomet Chem 1981, V218, P383 CAPLUS
(8) Casty, G; J Am Chem Soc 1995, V117, P7814 CAPLUS
(9) Chen, J; J Organomet Chem 1991, V407, P191 CAPLUS
(12) Girard, P; J Am Chem Soc 1980, V102, P2693 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2000 ACS
AB The reaction of trans-[Mn(CN)(CO)(dppm)2] (dppm = (Ph2P)2CH2) with [Fe{P(OMe)2}(NO)2(.eta.-C3H4R)] R = H, 1-Me, or 2-Me) in THF results in allylic alkylation of the CN- **ligand** to give trans-[Mn(CO)(CNCH2CM:CH2)(dppm)2][PF6].cntdot.THF and trans-[Mn(CO)(CNCH2CH:CHR)(dppm)2][PF6].cntdot.THF (R = H, Me). The x-ray crystal structure of trans-[Mn(CO)(CNCH2CMe:CH2)(dppm)2][PF6].cntdot.THF shows that in the cation the Mn(I) atom has approx. octahedral coordination, with the CO and CNCH2CMe:CH2 **ligands** mutually trans, and chelating dppm **ligands** occupying the 4 equatorial sites. Crystal data: monoclinic, space group P21/c, a 11.459(2), b 20.075(5), c 20.309(3) .ANG., .beta. 95.50(1).degree., Z = 4, R = 0.083, R' = 0.097.
AN 1991:693499 CAPLUS
DN 115:293499

TI Allylic alkylation of coordinated cyanide; the synthesis and x-ray crystal structure of trans-bis[bis(diphenylphosphino)methane-.kappa.P,P']carbonyl(2-methylallyl isocyanide-.kappa.C)manganese hexafluorophosphate tetrahydrofuran(1/1)
AU Connelly, Neil G.; Orpen, A. Guy; Rosair, Georgina M.; Worth, Gillian H.
CS Sch. Chem., Univ. Bristol, Bristol, BS8 1TS, UK
SO J. Chem. Soc., Dalton Trans. (1991), (7), 1851-4
CODEN: JCDTBI; ISSN: 0300-9246
DT Journal
LA English

L13 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2000 ACS
AB Asym. induction in metal-catalyzed allylic alkylations with stabilized nucleophiles places severe demands on the nature of the inducing **ligands** because of the distal relationship between the incoming nucleophile and the chiral environment. A model invoking creation of chiral pockets led to the generation of a series of chiral and optically active **ligands** derived from the com. available 1,1'-binaphthol. Asym. syntheses of nearly 70% enantiomer excess are accessible at practical operating temps. of 25-66.degree..
AN 1985:437000 CAPLUS
DN 103:37000
TI A model for metal-templated catalytic asymmetric induction via .pi.-allyl fragments
AU Trost, Barry M.; Murphy, Dennis J.
CS Dep. Chem., Univ. Wisconsin, Madison, WI, 53706, USA
SO Organometallics (1985), 4(6), 1143-5
CODEN: ORGND7; ISSN: 0276-7333
DT Journal
LA English

L13 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2000 ACS
AB Pd-catalyzed alkylation of Me2C:CHCH2OAc with dialkyl malonate anions gives the same product pattern as the stoichiometric alkylations of (.eta.3-3-methylbutenyl)palladium chloride and the corresponding cationic complex. Consequently, a (.pi.-allyl)palladium intermediate is probable in the catalytic reaction. According to NMR evidence, the reactive intermediate is an .eta.3- rather tha an .eta.1-allyl complex. Acceptor **ligands**, even weak ones such as phosphines, have a strong electronic influence on the reaction, and direct the attack toward the more substituted position. The formal charge of the complexes is important to the reactivity, but when phosphines are present as acceptor **ligands**, the formation of cationic intermediates may not be necessary.
AN 1984:175048 CAPLUS
DN 100:175048
TI Alkylation of (.pi.-allyl)palladium systems. Mechanism and regiocontrol
AU Aakermark, Bjoern; Hansson, Sverker; Krakenberger, Bertil; Vitagliano, Aldo; Zetterberg, Krister
CS Dep. Org. Chem., R. Inst. Technol., Stockholm, S-100 44, Swed.
SO Organometallics (1984), 3(5), 679-82
CODEN: ORGND7; ISSN: 0276-7333
DT Journal
LA English

L13 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2000 ACS
AB Allylic alkylation of alkyl-substituted .pi.-allylpalladium complexes requires enhancement of their electrophilicity by addn. of **ligands**. Phosphines and phosphites are preferred. The regiochem. of the alkylation as a function of **ligand** and .pi.-allyl complex is explored. Alkylation of cyclic compds. involves a strong preference for axial attacks.
AN 1978:507270 CAPLUS
DN 89:107270
TI Allylic alkylation: nucleophilic attack on .pi.-allylpalladium complexes
AU Trost, Barry M.; Weber, Lothar; Strege, Paul E.; Fullerton, Terry J.;

Dietsche, Thomas J.
CS Dep. Chem., Univ. Wisconsin, Madison, Wis., USA
SO J. Am. Chem. Soc. (1978), 100(11), 3416-26
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English

L13 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2000 ACS
AB Allylic alkylation of alkyl-substituted .pi.-allylpalladium complexes requires enhancement of their electrophilicity by addn. of **ligands**. Phosphines and phosphites are preferred. The regiochem. of the alkylation as a function of **ligand** and .pi.-allyl complex is explored. Alkylation of cyclic compds. involves a strong preference for axial attacks.
AN 1978:507270 CAPLUS
DN 89:107270
TI Allylic alkylation: nucleophilic attack on .pi.-allylpalladium complexes
AU Trost, Barry M.; Weber, Lothar; Strege, Paul E.; Fullerton, Terry J.; Dietsche, Thomas J.
CS Dep. Chem., Univ. Wisconsin, Madison, Wis., USA
SO J. Am. Chem. Soc. (1978), 100(11), 3416-26
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA English

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 NEWS  3  Feb  1  Addition of Machine-Translated Abstracts to CAplus
 NEWS  4  Feb 28  Patent Information Now Searchable in CAOLD
                  SDI/UPDATE SEARCH FIELD
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 NEWS  9  May  9  Sequence Similarity Batch Search in DGENE
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                  in INPADOC
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                  BY ADDITION OF CITED REFERENCES TO CAPLUS, CA,
                  REGISTRY, CASREACT, MARPAT, and MARPATPREV
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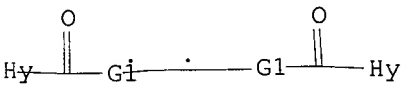


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BATCH **INCOMPLETE**
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PROJECTED ANSWERS: EXCEEDS 2326

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FULL SCREEN SEARCH COMPLETED - >1,000,000 TO ITERATE

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< 36.0% PROCESSED 359738 ITERATIONS ( 1 INCOMPLETE) 173 ANSWERS

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SEARCH TIME: 00.02.15

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L3          207 SEA SSS FUL L1

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FULL ESTIMATED COST                                     127.80     127.95

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        28652 MOS
       363033 MO
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          119 0R
       251473 W
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       262524 CR
          983 CRS
       263198 CR
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L4           5 L3 AND (MO OR W OR CR OR MOLYBDENUM OR TUNGSTEN OR CHROMIUM)

=> d l4 abs bib hitstr 1-5
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L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2000 ACS

AB The synthesis of poly(amide-ester)s from 2,6-pyridine dicarboxylic acid and ethanolamine derivs. was studied using direct and indirect polycondensation techniques. Direct polycondensation with aminoalcs. gave polymers with a statistical structure. Polycondensation with an intermediate reactive compd., a bis(amide-alc.) which has only one type of functional group, produced a more regular and defined polymer chain. These new polymers contain pyridine rings linked by ester and amide groups in the main chain, groups known to have complexing abilities. Chelation attempts with various metals were done in order to evaluate their possible use as chelating resins. As the synthesized poly(amide-ester)s are insol. in water, solid/liq. extns. have been carried out and the resin sorption for mixt. of basic and/or precious metals were studied under various exptl. conditions (reaction time and hydrochloric acid concn.). The polycondensates are Au(III)-selective and their capacity and desorption characteristics were evaluated.

AN 1999:805121 CAPLUS
DN 132:108680

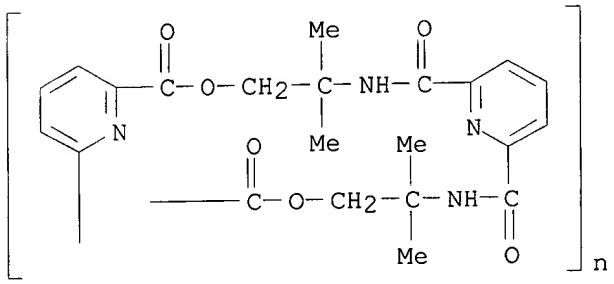
TI Synthesis of poly(amide-ester)s from 2,6-pyridine dicarboxylic acid and ethanolamine derivatives - investigation of the polymer sorption behavior towards heavy metal ions

AU Chevallier, Pascale; Soutif, Jean-Claude; Brosse, Jean-Claude; Grote, Manfred
CS Chimie et Physique des Materiaux Polymeres UMR 6515, CNRS - Universite du Maine, Le Mans, F-72017, Fr.

SO React. Funct. Polym. (1999), 42(2), 129-146
CODEN: RFPOF6; ISSN: 1381-5148
PB Elsevier Science B.V.
DT Journal
LA English

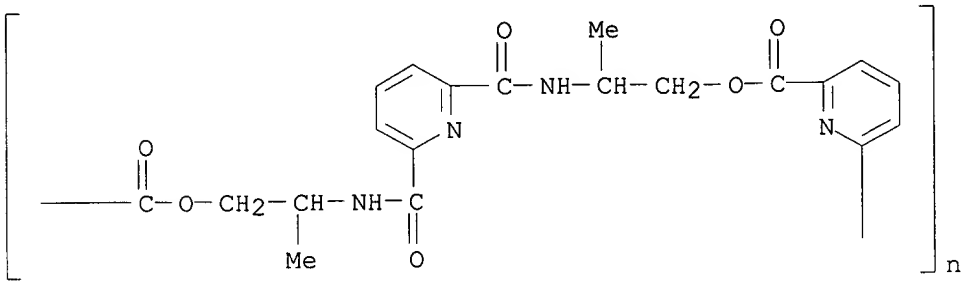
IT **255851-63-9P 255851-68-4P 255851-70-8P**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(synthesis of poly(amide-ester)s from 2,6-pyridinedicarboxylic acid chloride and ethanolamine derivs. and their sorption behavior towards heavy metal ions)

RN 255851-63-9 CAPLUS
CN Poly[2,6-pyridinediylcarbonyloxy(2,2-dimethyl-1,2-ethanediyl)iminocarbonyl-2,6-pyridinediylcarbonylimino(1,1-dimethyl-1,2-ethanediyl)oxycarbonyl] (9CI) (CA INDEX NAME)

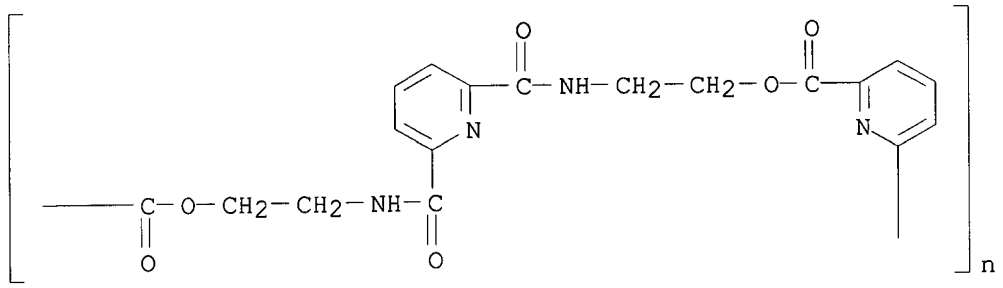


RN 255851-68-4 CAPLUS

CN Poly[2,6-pyridinediylcarbonyloxy(2-methyl-1,2-ethanediyl)iminocarbonyl-2,6-pyridinediylcarbonylimino(1-methyl-1,2-ethanediyl)oxycarbonyl] (9CI) (CA INDEX NAME)

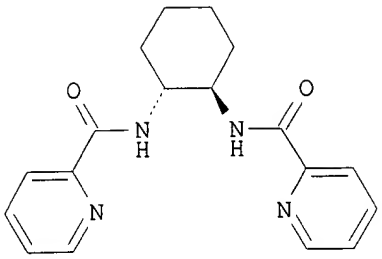


RN 255851-70-8 CAPLUS
CN Poly(2,6-pyridinediylcarbonyloxy-1,2-ethanediyliminocarbonyl-2,6-pyridinediylcarbonylimino-1,2-ethanediyloxycarbonyl) (9CI) (CA INDEX NAME)

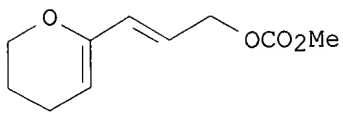


RE.CNT 14
RE
(2) Chessa, G; React Polym 1990, V12, P219 CAPLUS
(3) Chessa, G; React Polym 1991, V14, P143 CAPLUS
(4) Chevallier, P; Eur Poly J 1998, V34, P767 CAPLUS
(6) Grote, M; Anal Chim Acta 1985, V172, P223 CAPLUS
(7) Grote, M; Anal Chim Acta 1985, V175, P239 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2000 ACS
GI



II



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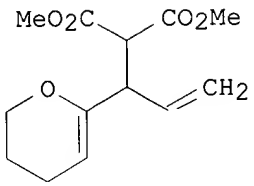


IV

AB The title reaction was examd. using (EtCN)3Mo(CO)3 (I) as catalyst and several diamine ligands. Thus, reacting PhCH:CHCH:CHCH2OCO2Me with (MeO2C)2CH using I and diamine II gave (MeO2C)2CC(CH:CH2)CH:CHPh in 98% ee. Polyenyl carbonate III gave diester IV in 96% ee after 1.5 h.

AN 1999:680946 CAPLUS
DN 132:78124

TI Regio- and enantioselective **molybdenum**-catalyzed alkylations of polyenyl esters

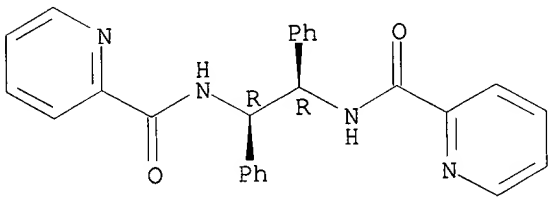
AU Trost, Barry M.; Hildbrand, Stefan; Dogra, Kalindi
CS Department of Chemistry, Stanford University, Stanford, CA, 94305-5080, USA

SO J. Am. Chem. Soc. (1999), 121(44), 10416-10417
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 132:78124

IT **230312-36-4**
RL: CAT (Catalyst use); USES (Uses)
(regio- and enantioselective **molybdenum**-catalyzed alkylation of polyenyl esters)

RN 230312-36-4 CAPLUS
CN 2-Pyridinecarboxamide, N,N'-[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 20
RE
(1) Adams, R; J Am Chem Soc 1979, V101, P2570 CAPLUS
(2) Andersson, P; J Org Chem 1991, V56, P5349 CAPLUS
(3) Faller, J; J Organomet Chem 1990, V383, P161 CAPLUS
(4) Faller, J; Organometallics 1988, V7, P1670 CAPLUS
(6) Glorius, F; Org Lett 1999, V1, P141 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2000 ACS

AB The reaction of CO2(CO)8 and [Cl3CC(O)OCH2]2 gave a novel double tetrahedral cluster compd. ([(CO)9Co3(.mu.3-C)C(O)OCH2]2 1) contg. two tetrahedral skeletons (Co3C) linked by a C(O)OCH2CH2OC(O) bridge. The reaction of 1 with different mol. ratios of Na[M(CO)3C5H4R] [M = Mo, W; R = H, C(O)Me] gave the one-step exchange products (CO)9Co3(.mu.3-C)C(O)OCH2CH2OC(O)(.mu.3-C)Co2M(CO)8(C5H4R) [M = Mo, R = H (2); M = Mo, R = C(O)Me (3); M = W, R = H (4); M = W, R = C(O)Me (5)] or the two-step exchange products [(C5H4R)(CO)8Co2M(.mu.3-C)C(O)OCH2]2 [M = Mo, R = H (6); M = Mo, R = C(O)Me (7); M = W, R = H (8); M = W, R = C(O)Me (9)]. By treating 5 or 9 with Na[Mo(CO)3C5H5] in 1/2 mol. ratio, the compd. (C5H5)(CO)8Co2Mo(.mu.3-C)C(O)OCH2CH2OC(O)(.mu.3-C)CoMoW(CO)7(C5H4C(O)Me)(C5H5) (10) or [(C5H5)(C5H4C(O)Me)(CO)7CoMoW(.mu.3-C)C(O)OCH2]2 (11) which have one or two chiral tetrahedral skeletons (CoMoWC) were obtained. Compds. 1-11 were characterized by C/H analyses, IR and 1H NMR. The results indicate that the Co(CO)3 group in different cluster cores has a different reactivity in a metal exchange reaction. The crystal structure of compd. 1 was detd. by single-crystal x-ray diffraction methods. The crystal belongs to monoclinic system with space group, P21/n(#14) and lattice parameters, a = 0.933 0(2) nm, b = 1.519 7(4) nm, c = 1.178 3(4) nm, .beta. = 91.16(2).degree., Z = 2, F(000) = 972.

AN 1999:562241 CAPLUS

DN 131:299543

TI Synthesis and characterization of new double tetrahedral transition metal clusters

AU Zhang, Jie; Chen, Xue-Nian; Ding, Er-Run; Yin, Yuan-Qi

CS Lanzhou Inst. Chem. Phys., Chin. Acad. Sci., Lanzhou, 730000, Peop. Rep. China

SO Gaodeng Xuexiao Huaxue Xuebao (1999), 20(8), 1172-1178
CODEN: KTHPDM; ISSN: 0251-0790

PB Gaodeng Jiaoyu Chubanshe

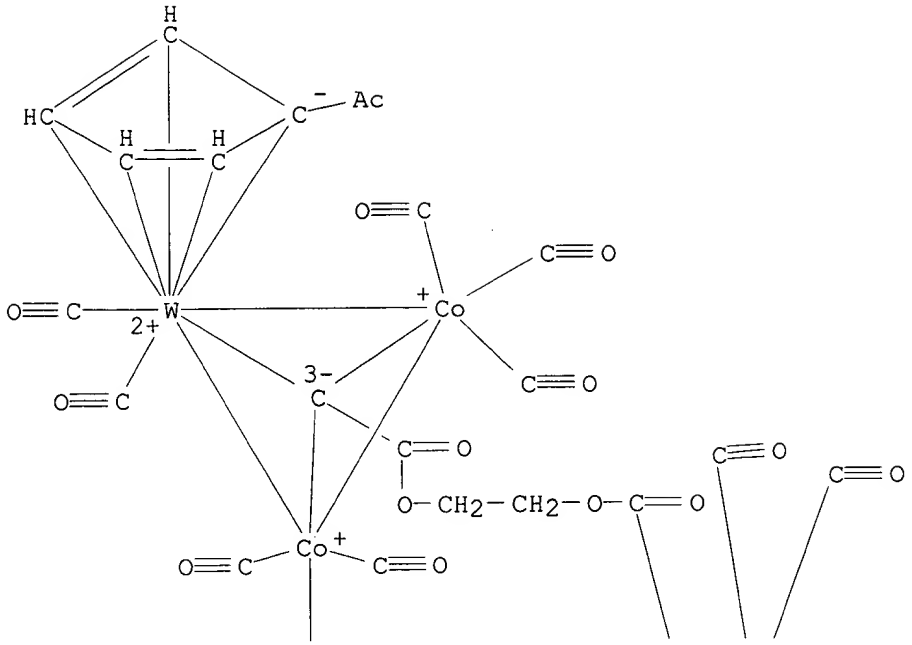
DT Journal

LA Chinese

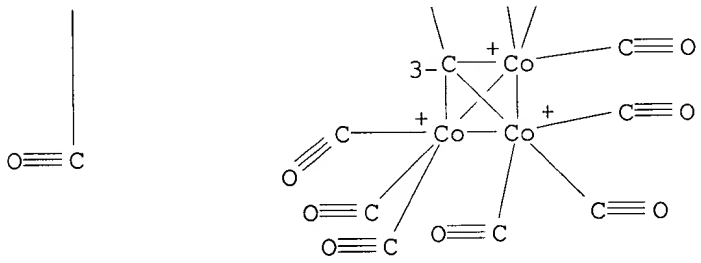
IT **247064-05-7P 247064-12-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and reaction with cyclopentadienylmolybdenum salt complex)

RN 247064-05-7 CAPLUS

CN Tungsten, [(1,2,3,4,5-.eta.)-1-acetyl-2,4-cyclopentadien-1-yl]dicarbonyl[.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]](pentadecacarbonylpentacobalt)-, (4Co-Co)(2Co-W) (9CI) (CA INDEX NAME)







RN 247064-12-6 CAPLUS
CN Tungsten, tetracarbonylbis(.eta.5-2,4-cyclopentadien-1-yl)[.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]]bis(hexacarbonyldicobalt)di-, (2Co-Co)(4Co-W) (9CI) (CA INDEX NAME)

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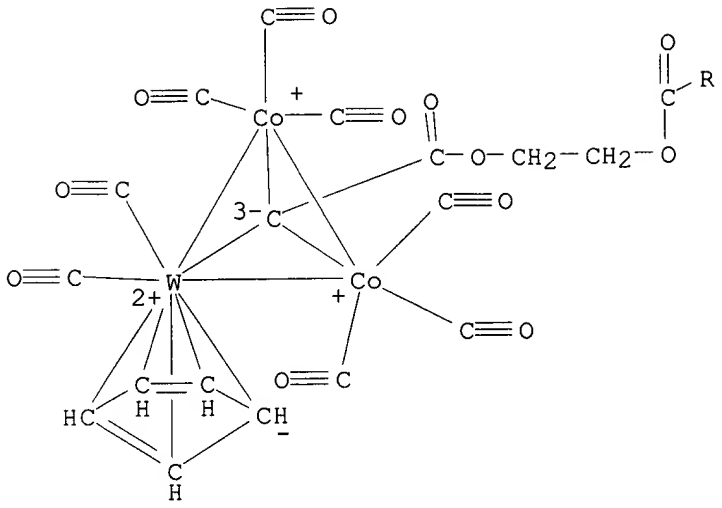
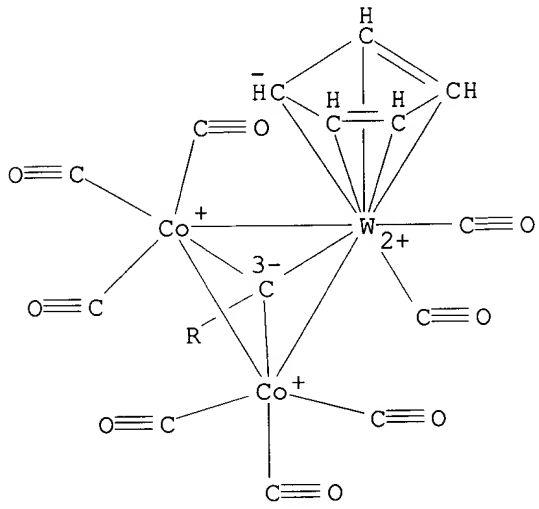


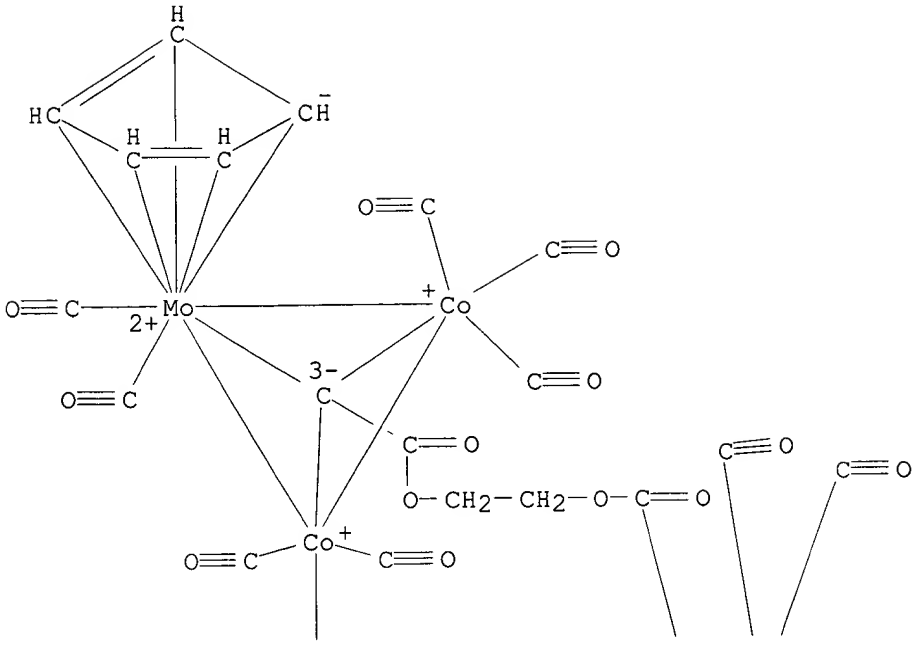
PAGE 2-A



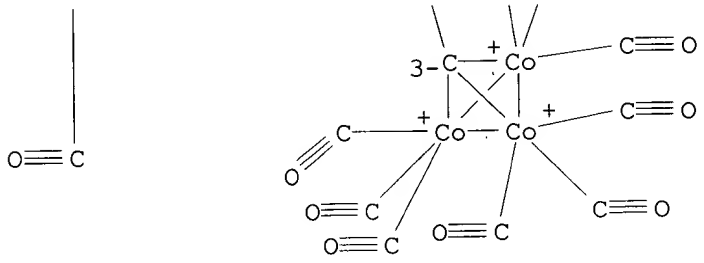
IT **247063-97-4P 247064-00-2P 247064-02-4P**
**247064-07-9P 247064-10-4P 247064-15-9P**
**247064-17-1P 247064-20-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 247063-97-4 CAPLUS

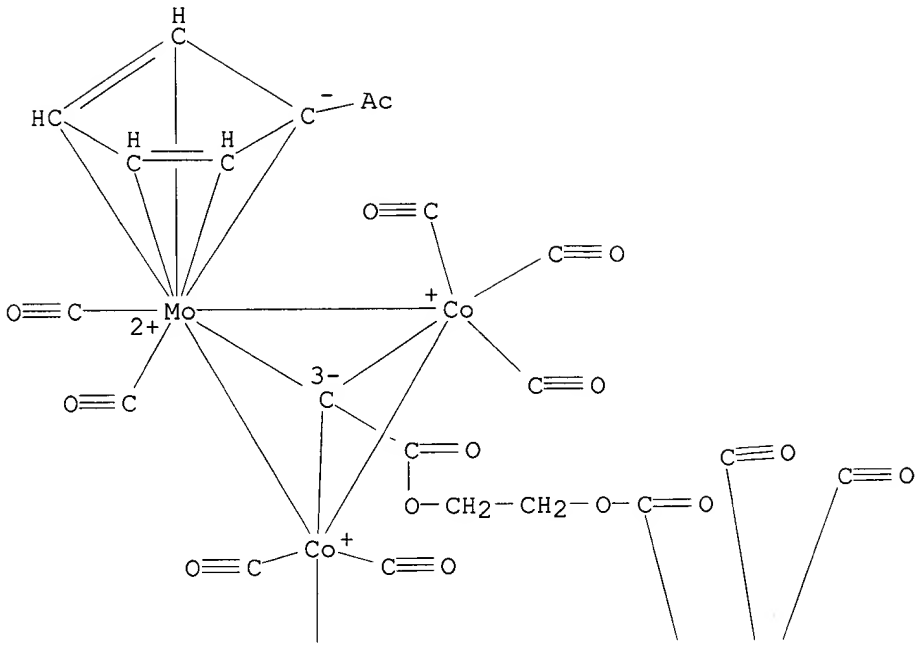
CN Molybdenum, dicarbonyl(.eta.5-2,4-cyclopentadien-1-yl)[.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]](pentadecacarbonylpentacobalt)-, (4Co-Co)(2Co-Mo) (9CI) (CA INDEX NAME)



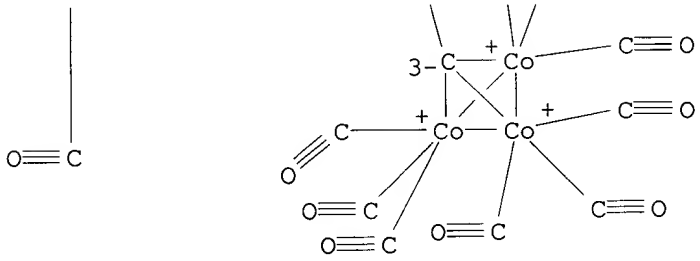




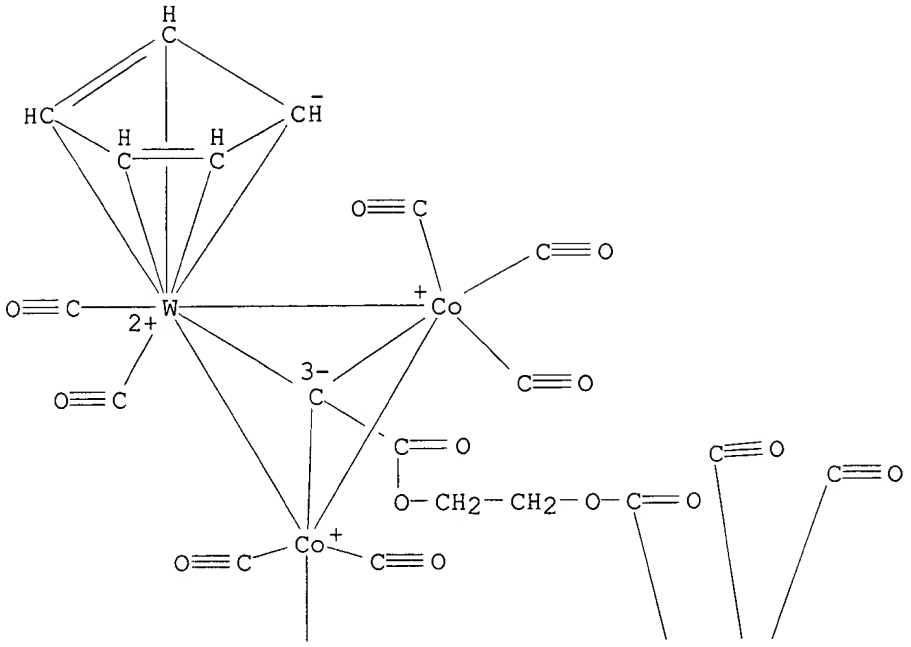
RN 247064-00-2 CAPLUS
CN Molybdenum, [(1,2,3,4,5-.eta.)-1-acetyl-2,4-cyclopentadien-1-yl]dicarbonyl[.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]](pentadecacarbonylpentacobalt)-, (4Co-Co)(2Co-Mo) (9CI) (CA INDEX NAME)



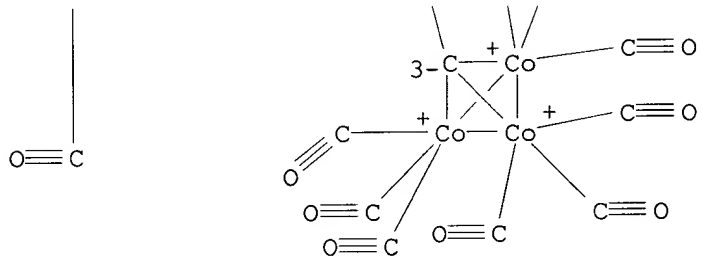




RN 247064-02-4 CAPLUS
CN Tungsten, dicarbonyl(.eta.5-2,4-cyclopentadien-1-yl)[.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]](pentadecacarbonylpentacobalt)-, (4Co-Co)(2Co-W) (9CI) (CA INDEX NAME)

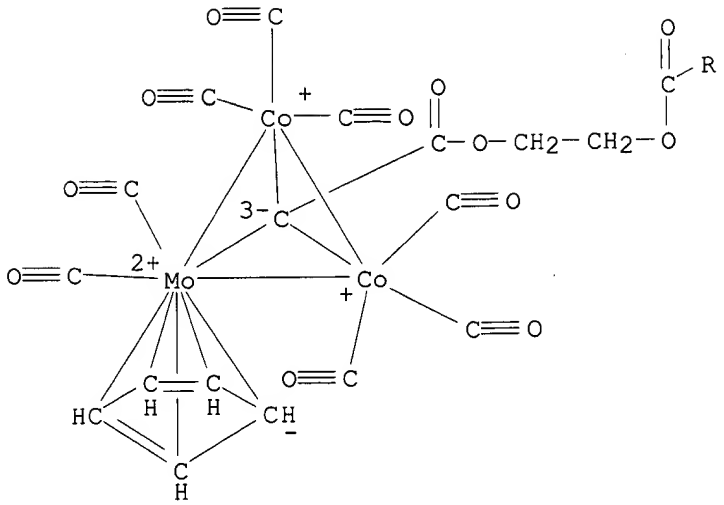




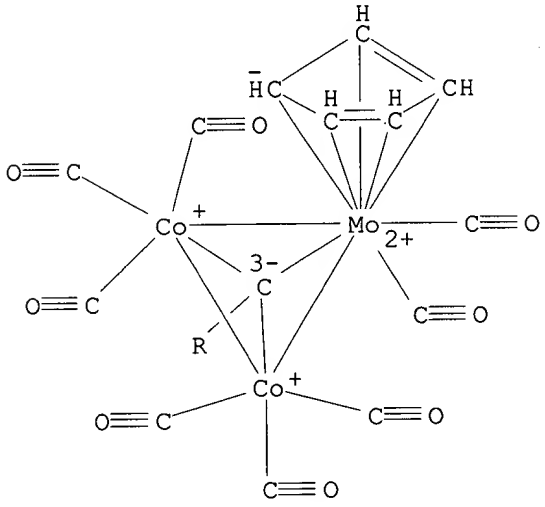


RN 247064-07-9 CAPLUS
CN Molybdenum, tetracarbonylbis(.eta.5-2,4-cyclopentadien-1-yl)[.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]]bis(hexacarbonyldicobalt)di-, (2Co-Co)(4Co-Mo) (9CI) (CA INDEX NAME)

PAGE 1-A

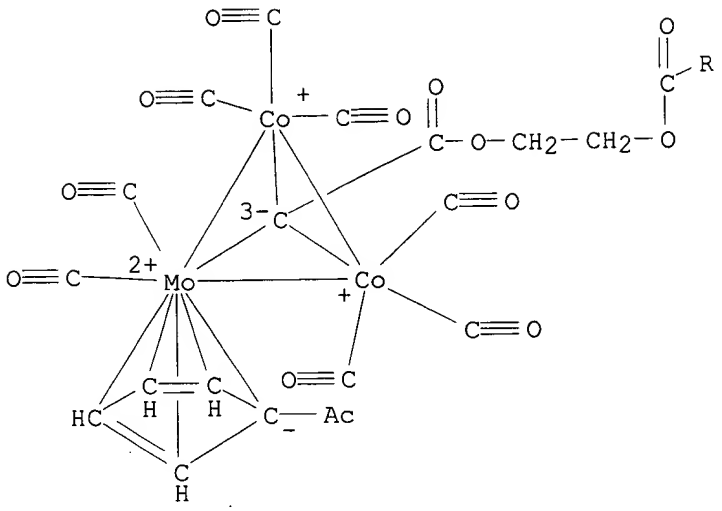


PAGE 2-A



RN 247064-10-4 CAPLUS
CN Molybdenum, bis[(1,2,3,4,5-.eta.)-1-acetyl-2,4-cyclopentadien-1-yl]tetracarbonyl[.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]]bis(hexacarbonyldicobalt)di-, (2Co-Co)(4Co-Mo) (9CI) (CA INDEX NAME)

PAGE 1-A



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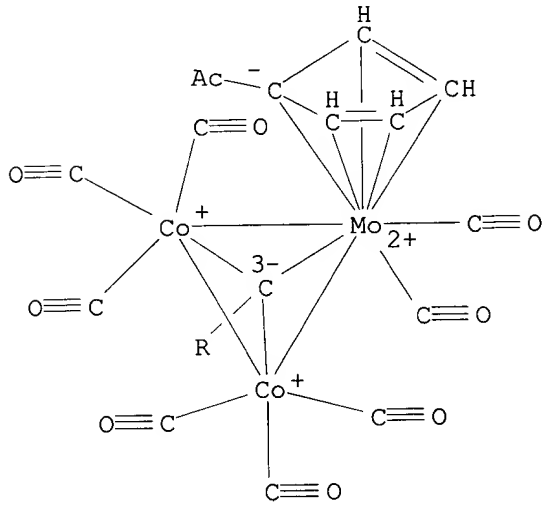
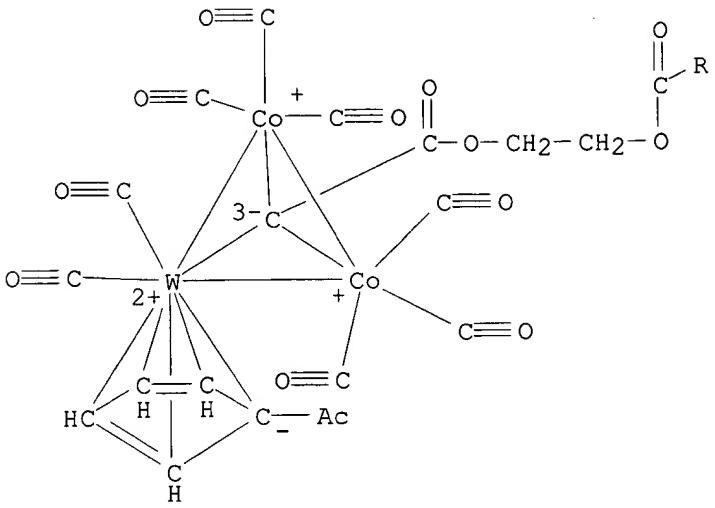
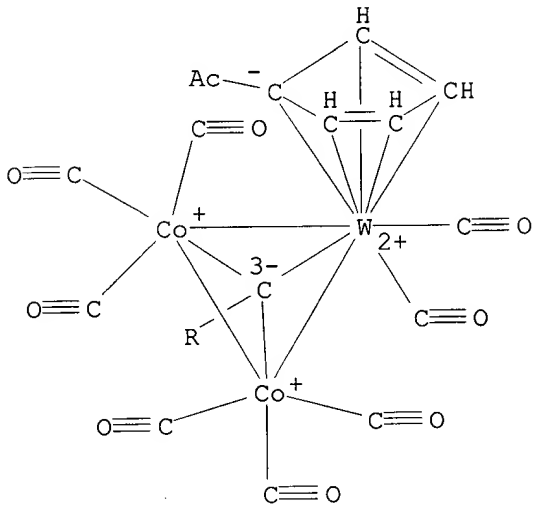


RN 247064-15-9 CAPLUS
CN Tungsten, bis[(1,2,3,4,5-.eta.)-1-acetyl-2,4-cyclopentadien-1-yl]tetracarbonyl[.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]]bis(hexacarbonyldicobalt)di-, (2Co-Co)(4Co-W) (9CI) (CA INDEX NAME)

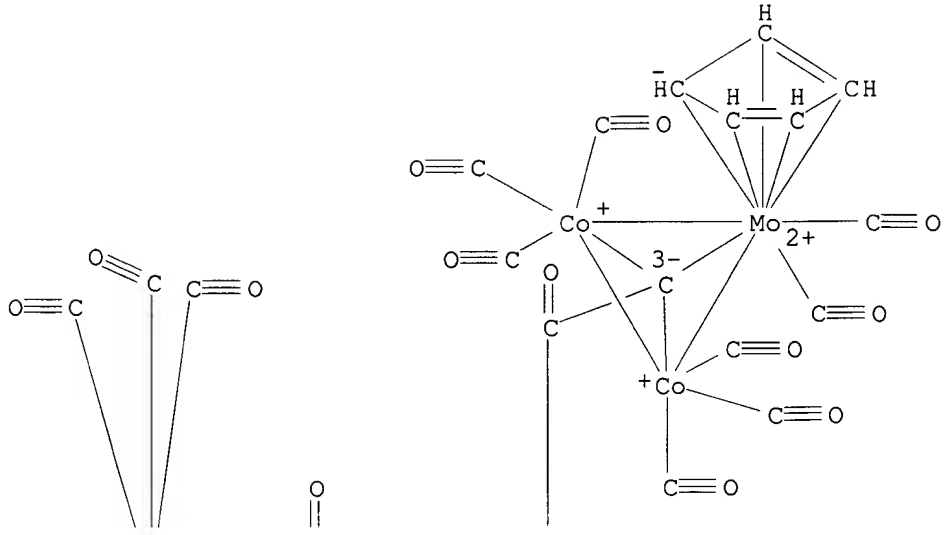






RN 247064-17-1 CAPLUS
CN Tungsten, [(1,2,3,4,5-.eta.)-1-acetyl-2,4-cyclopentadien-1-yl]dicarbonylbis[dicarbonyl(.eta.5-2,4-cyclopentadien-1-yl)molybdenum][.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]](nonacarbonyltricobalt)-, (Co-Co)(3Co-Mo)(Co-W)(Mo-W) (9CI) (CA INDEX NAME)

PAGE 1-A



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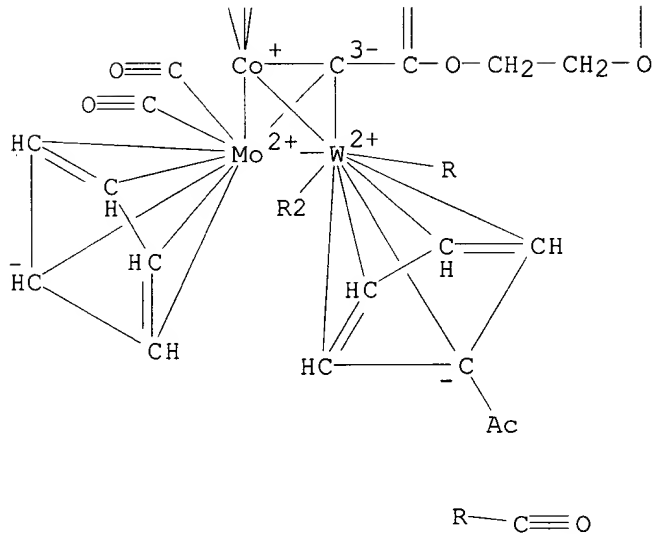

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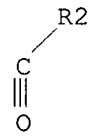
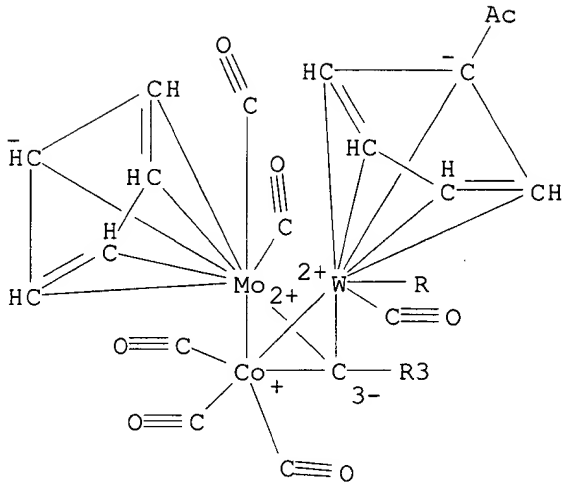
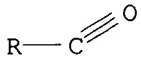


RN 247064-20-6 CAPLUS
CN Tungsten, bis[(1,2,3,4,5-.eta.)-1-acetyl-2,4-cyclopentadien-1-yl]tetracarbonylbis[dicarbonyl(.eta.5-2,4-cyclopentadien-1-yl)molybdenum][.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]]bis(tricarbonylcobalt)-, (2Co-Mo)(2Co-W)(2Mo-W) (9CI) (CA

INDEX NAME)

PAGE 1-A





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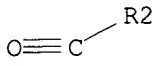

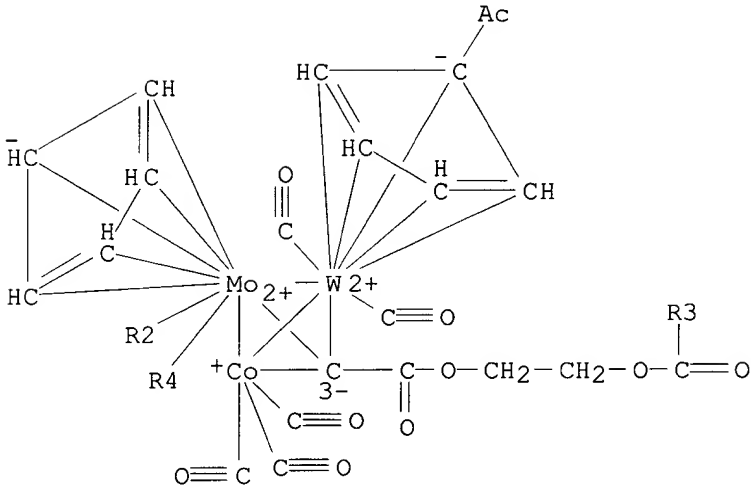

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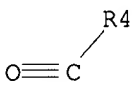


L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2000 ACS

AB Complexes of a selected class of chiral ligands with general formula CyN-(C:O)-X-C*R1R3-C*R2R4-X-(C:O)-CyN (X = O, NH, NR; CyN = nitrogen contg. heterocycle) with **molybdenum**, **tungsten** or **chromium**, preferably **molybdenum**, are effective as catalysts in highly enantioselective and regioselective alkylation of allylic substrates. Such compns. provide a versatile and low-cost alternative to existing catalysts. Thus, PhCH:CHCH2OCO2Me reacts with NaHC(CO2Me)2 in refluxing THF in the presence of [(EtCN)3Mo(CO)3] and chiral ligand N,N'-1R,2R-cyclohexanediylbis(2-pyridinecarboxamide) to give alkylated products in 88% isolated yield with a regioselectivity of 32:1 in favor of the branched (S)-PhCH[CH(CO2Me)2]CH:CH2 product (99% ee) over the linear product PhCH:CHCH2CH(CO2Me)2.

AN 1999:421592 CAPLUS

DN 131:101904

TI **Molybdenum** bis(pyridinecarboxamide) chiral ligand complex catalytic compositions and methods for asymmetric allylic alkylation

IN Trost, Barry M.; Hachiya, Iwao

PA The Board of Trustees of the Leland Stanford Junior University, USA; Chirotech Technology Limited

SO PCT Int. Appl., 46 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9932225 | A2 | 19990701 | WO 1998-GB3850 | 19981221 |
| | WO 9932225 | A3 | 19991104 | | |
| | W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 9917711 | A1 | 19990712 | AU 1999-17711 | 19981221 |
| PRAI | US 1997-68128 | | 19971219 | | |
| | WO 1998-GB3850 | | 19981221 | | |

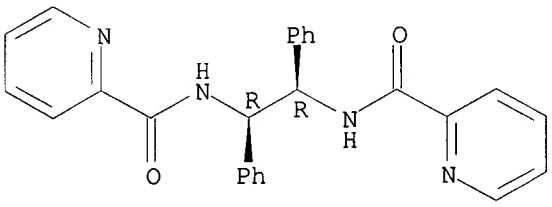
OS CASREACT 131:101904; MARPAT 131:101904

IT **230312-36-4D**, **molybdenum**, **tungsten** and **chromium** complexes
RL: CAT (Catalyst use); USES (Uses)
(catalyst for regioselective and enantioselective allylic alkylation)

RN 230312-36-4 CAPLUS

CN 2-Pyridinecarboxamide, N,N'-[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

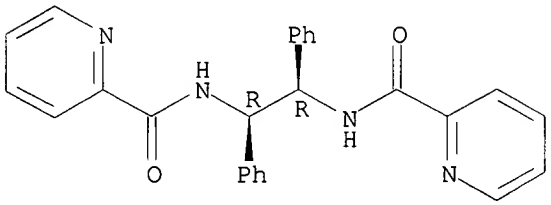



IT **230312-36-4**
RL: CAT (Catalyst use); USES (Uses)
(chiral ligand for **molybdenum** complex catalyst for regioselective and enantioselective allylic alkylation)

RN 230312-36-4 CAPLUS

CN 2-Pyridinecarboxamide, N,N'-[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2000 ACS

AB The higher-nuclearity cluster compd. [Co3(CO)9(.mu.3-C)C(O)OCH2]2 (1) was isolated from the reaction of [Cl3CC(O)OCH2]2 and Co2(CO)8, and its metal exchange reaction with Na[M(CO)3{.eta.5-C5H4C(O)C6H4C(O)OMe}] (M = Mo or W) is discussed together with its structure detn. by single-crystal x-ray diffraction methods.

AN 1999:232442 CAPLUS

DN 130:338242

TI Synthesis, reactivity and crystal structure of a novel cluster [Co3(CO)9(.mu.3-C)C(O)OCH2]2

AU Zhang, Ji; Chen, Xue-Nian; Ding, Er-Run; Yin, Yuan-Qi; Sun, Jie

CS State Key Laboratory for Oxo Synthesis and Selective Oxidation, Lanzhou Institute of Chemical Physics, Chinese Academy of Sciences, Lanzhou, 730000, Peop. Rep. China

SO J. Chem. Res., Synop. (1999), (3), 224-225
CODEN: JRPSDC; ISSN: 0308-2342

PB Royal Society of Chemistry

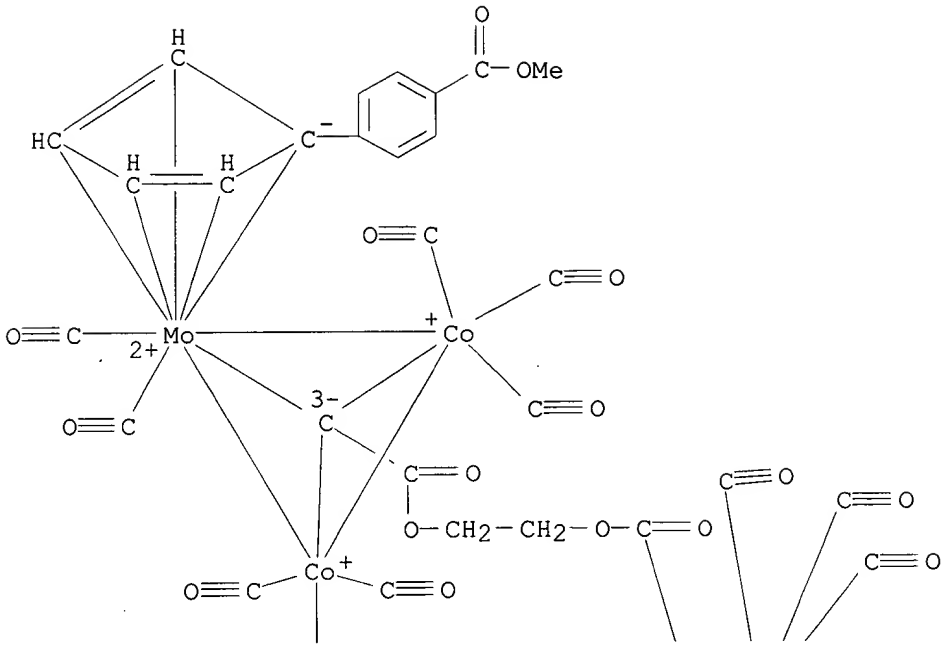
DT Journal

LA English

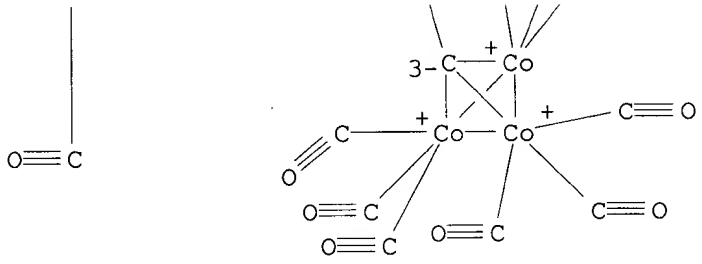
IT **224442-58-4P 224442-61-9P 224442-63-1P**
**224442-67-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 224442-58-4 CAPLUS

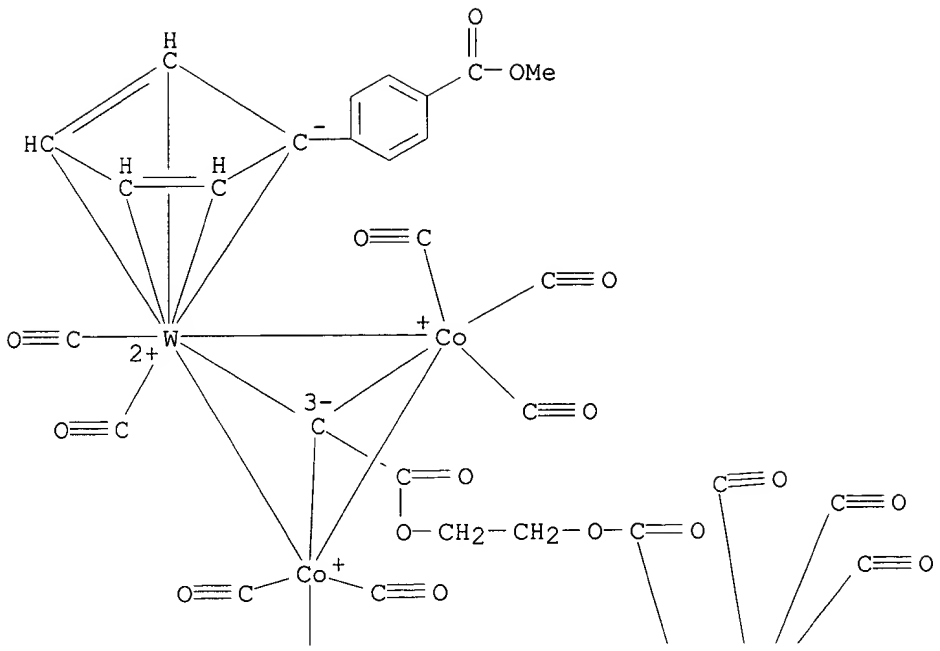
CN Molybdenum, dicarbonyl[.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]][(1,2,3,4,5-.eta.)-1-[4-(methoxycarbonyl)phenyl]-2,4-cyclopentadien-1-yl](pentadecacarbonylpentacobalt)-, (4Co-Co)(2Co-Mo) (9CI) (CA INDEX NAME)



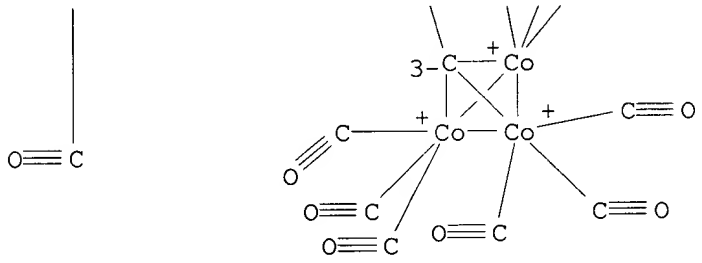




RN 224442-61-9 CAPLUS
CN Tungsten, dicarbonyl[.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]][(1,2,3,4,5-.eta.)-1-[4-(methoxycarbonyl)phenyl]-2,4-cyclopentadien-1-yl](pentadecacarbonylpentacobalt)-, (4Co-Co)(2Co-W) (9CI) (CA INDEX NAME)

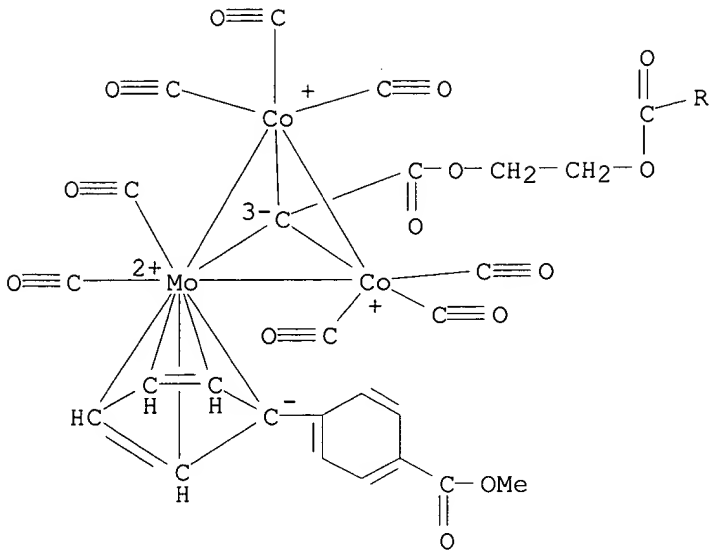






RN 224442-63-1 CAPLUS
CN Molybdenum, tetracarbonyl[.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]]bis[(1,2,3,4,5-.eta.)-1-[4-(methoxycarbonyl)phenyl]-2,4-cyclopentadien-1-yl](dodecacarbonyltetracobalt)di-, (2Co-Co)(4Co-Mo) (9CI) (CA INDEX NAME)

PAGE 1-A



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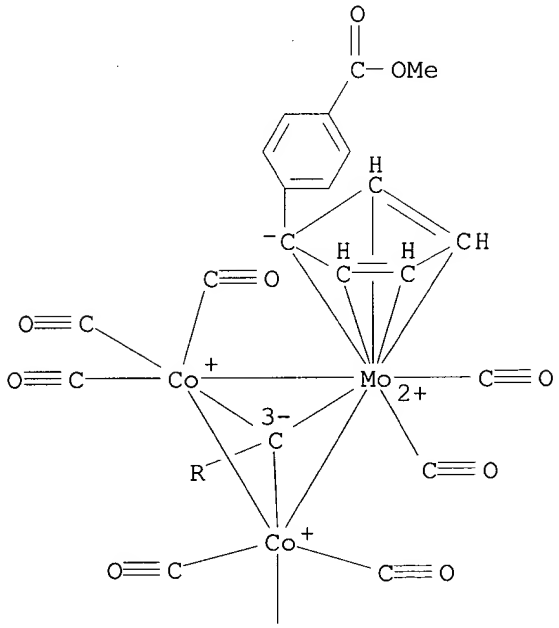
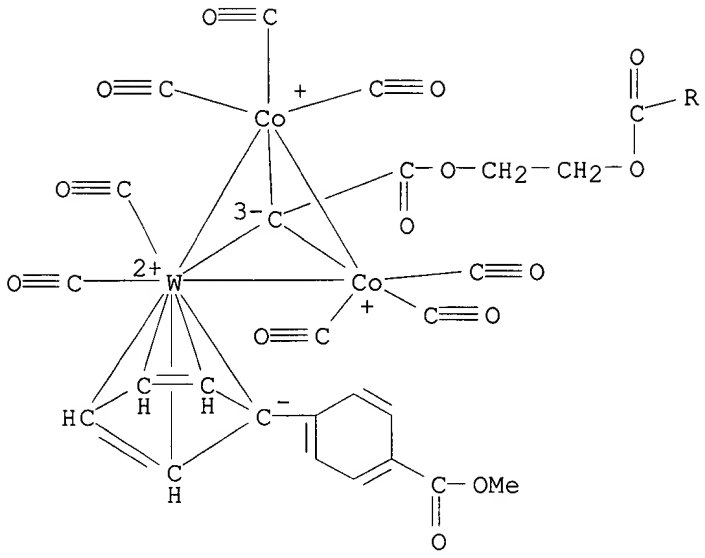


PAGE 3-A

RN 224442-67-5 CAPLUS
CN Tungsten, tetracarbonyl[.mu.6-[1,2-ethanediylbis[oxy(2-oxo-2-ethanyl-1-ylidyne)]]]bis[(1,2,3,4,5-.eta.)-1-[4-(methoxycarbonyl)phenyl]-2,4-cyclopentadien-1-yl](dodecacarbonyltetracobalt)di-, (2Co-Co)(4Co-W) (9CI) (CA INDEX NAME)

PAGE 1-A



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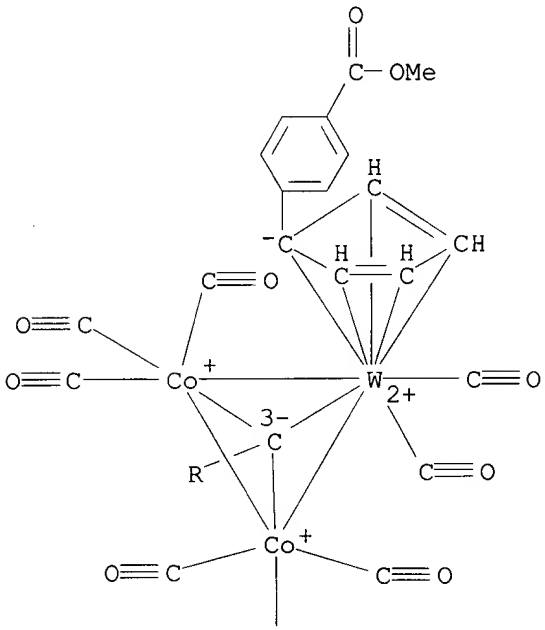
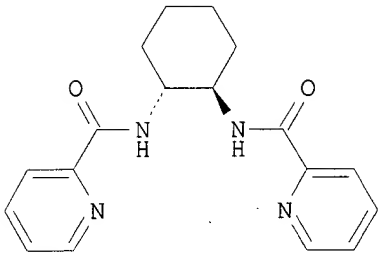


PAGE 3-A

RE.CNT 7
RE
(1) Ding, E; J Chem Res (S) 1998, P246 CAPLUS

(2) Ding, E; J Organomet Chem 1998, V559, P157 CAPLUS
(3) Penfold, B; Acc Chem Res 1973, V6, P73 CAPLUS
(4) Seyferth, D; J Organomet Chem 1973, V50, P265 CAPLUS
(5) Vahrenkamp, H; Comments Inorg Chem 1985, V4, P253 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2000 ACS
GI



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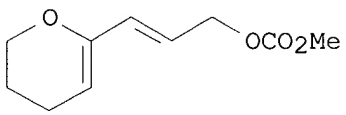

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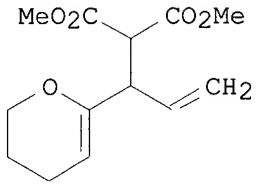
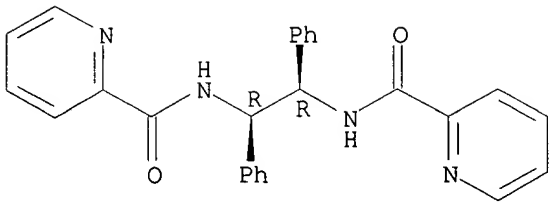


IV

AB The title reaction was examd. using (EtCN)3Mo(CO)3 (I) as catalyst and several diamine ligands. Thus, reacting PhCH:CHCH:CHCH2OCO2Me with (MeO2C)2CH using I and diamine II gave (MeO2C)2CC(CH:CH2)CH:CHPh in 98% ee. Polyenyl carbonate III gave diester IV in 96% ee after 1.5 h.
AN 1999:680946 CAPLUS
DN 132:78124
TI Regio- and enantioselective **molybdenum**-catalyzed alkylations of polyenyl esters
AU Trost, Barry M.; Hildbrand, Stefan; Dogra, Kalindi
CS Department of Chemistry, Stanford University, Stanford, CA, 94305-5080, USA
SO J. Am. Chem. Soc. (1999), 121(44), 10416-10417
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 132:78124
IT **230312-36-4**
RL: CAT (Catalyst use); USES (Uses)
(regio- and enantioselective **molybdenum**-catalyzed alkylation of polyenyl esters)
RN 230312-36-4 CAPLUS
CN 2-Pyridinecarboxamide, N,N'-[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 20

RE

(1) Adams, R; J Am Chem Soc 1979, V101, P2570 CAPLUS
(2) Andersson, P; J Org Chem 1991, V56, P5349 CAPLUS
(3) Faller, J; J Organomet Chem 1990, V383, P161 CAPLUS
(4) Faller, J; Organometallics 1988, V7, P1670 CAPLUS
(6) Glorius, F; Org Lett 1999, V1, P141 CAPLUS

```
=> s l3 and (Mo 0r W or Cr or Molybdenum or Tungsten or Chromium)

            5 L3
        52071 MO
        43281 MOS
        93085 MO
                (MO OR MOS)
         1809 0R
       377663 W
            0 MO 0R W
                (MO(W)0R(W)W)
        74685 CR
         1187 CRS
        75602 CR
                (CR OR CRS)
        56308 MOLYBDENUM
            5 MOLYBDENUMS
        56309 MOLYBDENUM
                (MOLYBDENUM OR MOLYBDENUMS)
        73936 TUNGSTEN
           22 TUNGSTENS
        73936 TUNGSTEN
                (TUNGSTEN OR TUNGSTENS)
        81588 CHROMIUM
           22 CHROMIUMS
        81591 CHROMIUM
                (CHROMIUM OR CHROMIUMS)
L5          3 L3 AND (MO 0R W OR CR OR MOLYBDENUM OR TUNGSTEN OR CHROMIUM)

=> d abs bib fhitstr 1-3


L5   ANSWER 1 OF 3  USPATFULL
AB     The present invention contemplates a compound defined by the following
       formula: ##STR1## that inhibits the binding between the VLA-4 and the
       fibronectin CS-1 compound. Pharmaceutical compositions containing a
       contemplated compound and methods for treating immunoinflammatory
       conditions using the compound are also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AN     1999:92778  USPATFULL
TI     CS-1 peptidomimetics, compositions and methods of using the same
IN     Arrhenius, Thomas S., San Diego, CA, United States
       Elices, Mariano J., San Diego, CA, United States
       Gaeta, Federico C. A., Olivenhain, CA, United States
PA     Cytel Corporation, San Diego, CA, United States (U.S. corporation)
PI     US 5936065  19990810
AI     US 1995-462424  19950605 (8)
RLI    Continuation-in-part of Ser. No. US 1994-349024, filed on 2 Dec 1994,
       now abandoned which is a continuation-in-part of Ser. No. US
       1993-164101, filed on 6 Dec 1993, now abandoned
DT     Utility
EXNAM  Primary Examiner: Tsang, Cecilia J.; Assistant Examiner: Lukton, David
LREP   Campbell & Flores LLP
CLMN   Number of Claims: 2
ECL    Exemplary Claim: 1
DRWN   8 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 3625
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT  209600-98-6
        (fibronectin CS-1 peptidomimetics for inhibiting binding of CS-1 to
```

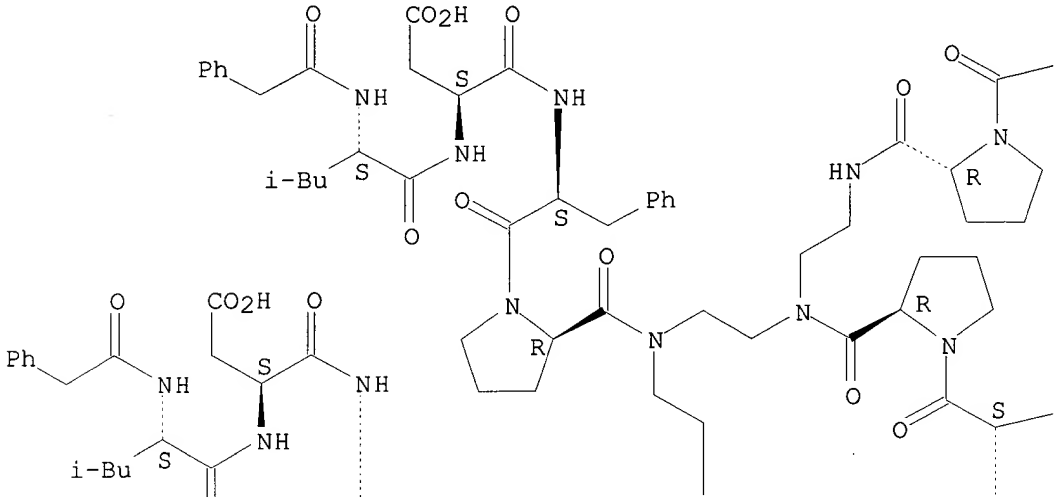
VLA-4 and for treating immunoinflammatory conditions)

RN 209600-98-6 USPATFULL

CN D-Proline, N-(phenylacetyl)-L-leucyl-L-.alpha.-aspartyl-L-phenylalanyl-, 4,4',4'',4''',4''''-pentaamide with N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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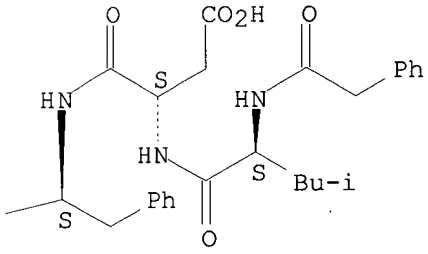

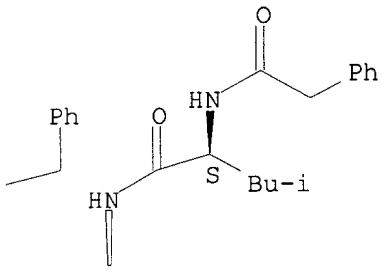

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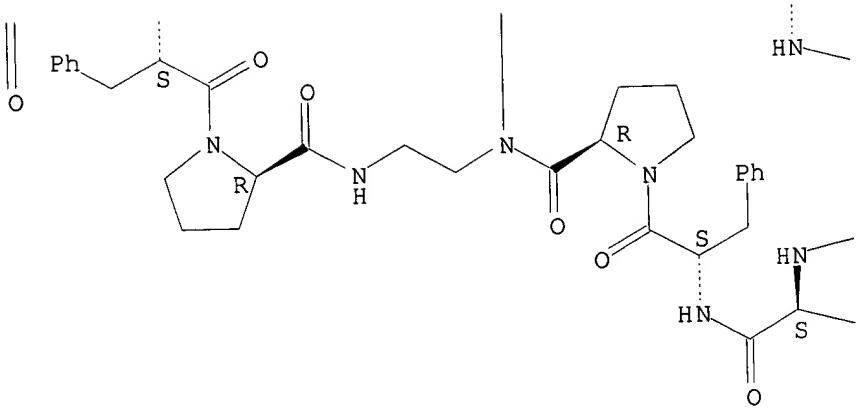
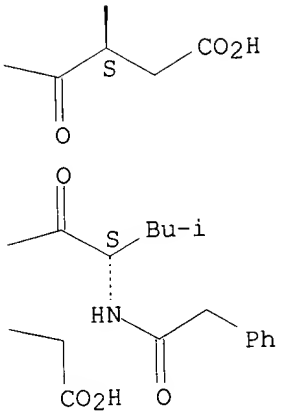


PAGE 2-B



L5 ANSWER 2 OF 3 USPATFULL

AB The present invention contemplates a compound defined by the following formula: ##STR1## that inhibits the binding between the VLA-4 and the fibronectin CS-1 compound. Pharmaceutical compositions containing a contemplated compound and methods for treating immunoinflammatory conditions using the compound are also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 1998:124555 USPATFULL

TI CS-1 peptidomimetics, compositions and methods of using same

IN Arrhenius, Thomas S., San Diego, CA, United States
Elices, Mariano J., San Diego, CA, United States
Gaeta, Federico C. A., Olivenhain, CA, United States

PA Cytel Corporation, San Diego, CA, United States (U.S. corporation)

PI US 5821231 19981013

AI US 1995-461056 19950605 (8)

RLI Continuation-in-part of Ser. No. US 1994-349024, filed on 2 Dec 1994 which is a continuation-in-part of Ser. No. US 1993-164101, filed on 6 Dec 1993, now abandoned

DT Utility

EXNAM Primary Examiner: Tsang, Cecilia J.; Assistant Examiner: Gupta, Anish

LREP Campbell & Flores LLP

CLMN Number of Claims: 25

ECL Exemplary Claim: 1

DRWN 8 Drawing Figure(s); 7 Drawing Page(s)

LN.CNT 3766

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **209600-98-6P**

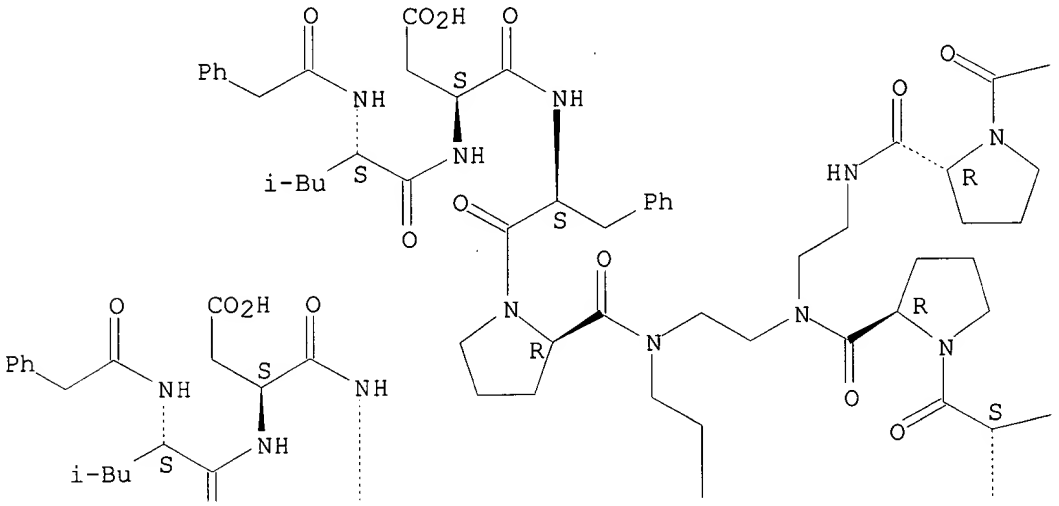
(prepn. of CS-1 peptidomimetics and their compns.)

RN 209600-98-6 USPATFULL

CN D-Proline, N-(phenylacetyl)-L-leucyl-L-.alpha.-aspartyl-L-phenylalanyl-, 4,4',4'',4''',4''''-pentaamide with N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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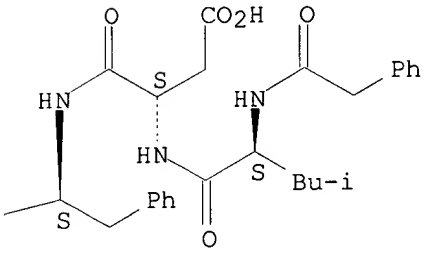

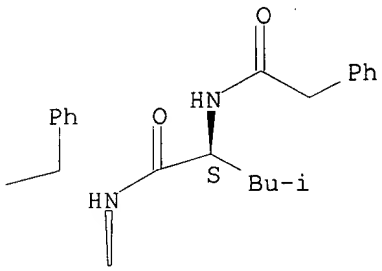

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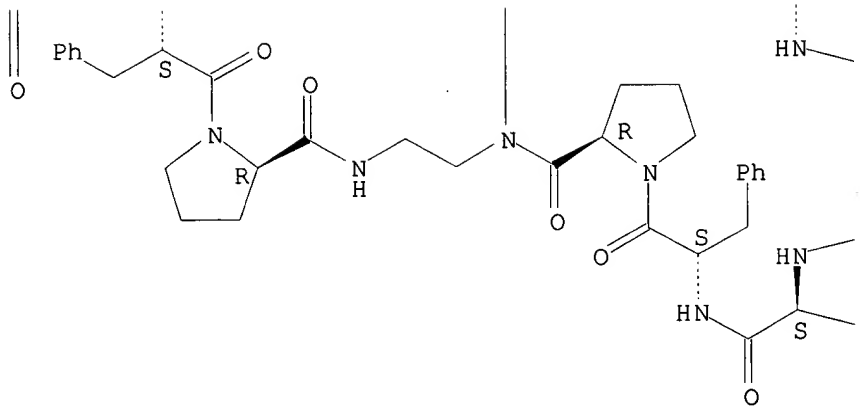

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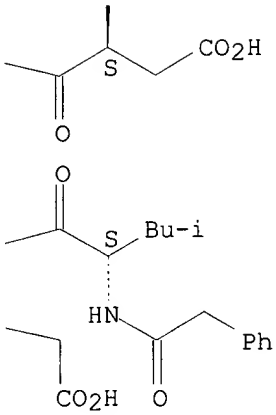


L5 ANSWER 3 OF 3 USPATFULL

AB The present invention contemplates a compound defined by the following formula: ##STR1## that inhibits the binding between the VLA-4 and the fibronectin CS-1 compound. Pharmaceutical compositions containing a contemplated compound and methods for treating immunoinflammatory conditions using the compound are also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AN 1998:72598 USPATFULL

TI CS-1 peptidomimetics, compositions and methods of using the same

IN Arrhenius, Thomas S., San Diego, CA, United States
Elices, Mariano J., San Diego, CA, United States
Gaeta, Federico C.A., Olivenhain, CA, United States

PA Cytel Corporation, San Diego, CA, United States (U.S. corporation)

PI US 5770573 19980623

AI US 1995-462219 19950605 (8)

RLI Continuation-in-part of Ser. No. US 1994-349024, filed on 2 Dec 1994 which is a continuation-in-part of Ser. No. US 1993-164101, filed on 6 Dec 1993, now abandoned

DT Utility

EXNAM Primary Examiner: Tsang, Cecilia J.; Assistant Examiner: Gupta, Anish

LREP Campbell & Flores LLP

CLMN Number of Claims: 14

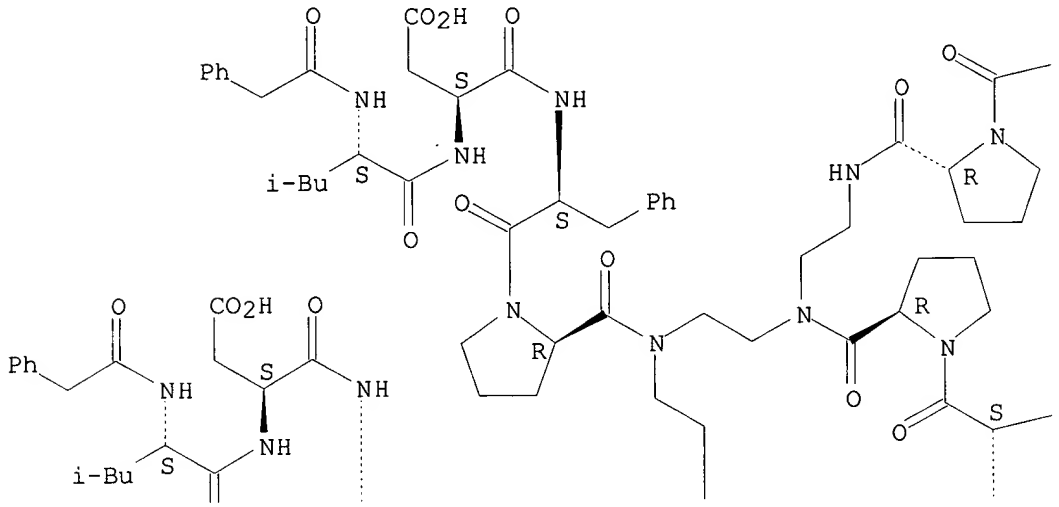
ECL Exemplary Claim: 1

DRWN 8 Drawing Figure(s); 7 Drawing Page(s)

LN.CNT 3926
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **209600-98-6P**
(prepn. of CS-1 peptidomimetics and their compns.)
RN 209600-98-6 USPATFULL
CN D-Proline, N-(phenylacetyl)-L-leucyl-L-.alpha.-aspartyl-L-phenylalanyl-, 4,4',4'',4''',4''''-pentaamide with N-(2-aminoethyl)-N'-[2-[(2-aminoethyl)amino]ethyl]-1,2-ethanediamine (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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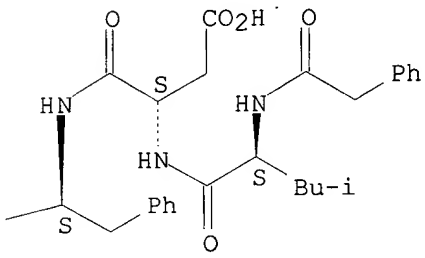

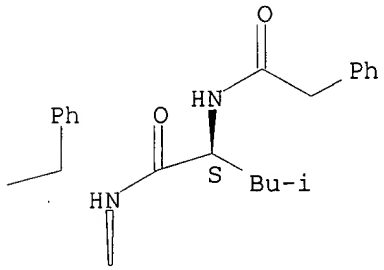

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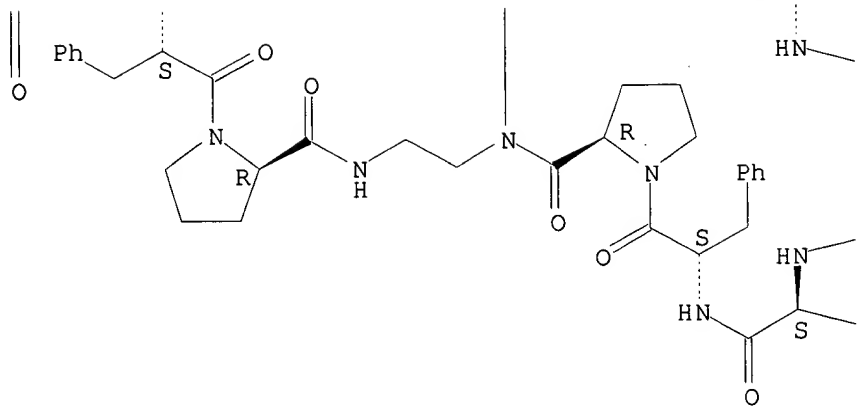

PAGE 2-B